

REMARKS

The Applicant has fully considered the November 21, 2002 Office Action in the above-mentioned pending patent application. This amendment has been prepared to address the rejections outlined in that Office Action.

Claims 1, 2, 5-6 and 12 were rejected under 35 U.S.C. 102(b) as being anticipated by Buchanan (U.S. PN 1,299,117). Claim 1 as originally filed recites the limitation that the upper wing is "located aft and above in relation to the coanda". It also contains the limitation that the lower wing is located aft and below in relationship to the coanda and "below and forward in relationship to the upper wing". Neither of these limitations are found in or disclosed in Buchanan.

In the first paragraph on Page 3 of the office action it states "Buchanan teaches the coandas have a curved top surface and a curved bottom surface and a generally downward angle with relation from forward to aft of the fuselage (fig. 3)". This means the Examiner considers the main spar 2 as best seen in figures 2 and 3 of Buchanan as the equivalent of the coanda in the present application that would mean they consider the wing to the right and slightly below the spar would be the equivalent of the lower wing of the present invention. However, Buchanan does not disclose a wing that would correspond to the upper wing of the present invention and thus meet the limitation of being "located aft and above the coanda." In turn, Buchanan also does not disclose the limitation of a lower wing being located "below and forward in relationship to the upper wing".

Further claims 1 and 12 have been amended to include the limitation that the coanda splits the airflow between the upper wing and the lower wing and increases density and velocity

of the airflow across the top surface of the lower wing. None of the cited prior art discloses a wing configuration that operates in this manner.

Claims 2, 5 and 6 all depend directly from Claim 1 as such these limitations are included in Claims 2, 5 and 6. These same limitations are found in Claim 12.

For the reasons cited above, the Applicant respectfully requests that the rejection based upon 35 U.S.C. 102 in view of Buchanan be withdrawn with regard to Claims 1, 2, 5, 6 and 12.

Claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan in view of Ratony (DES 304,821). Claim 7 is dependent upon claim 1 and therefore includes all of the limitations of claim 1. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. MPEP § 2143.03. As previously mentioned, Buchanan does not disclose a wing configuration with an upper wing which is properly located to meet the limit limitations of being aft and above in relation to the coanda and such that the lower wing is below and forward in relationship to the upper wing. Also none of the cited prior art discloses a wing configuration that includes the limitation of the coanda splitting the airflow between the upper wing and the lower wing and increasing the density and velocity of the airflow across the top surface of the lower wing.

Further the engines on Ratony are located on a pair of wings that are attached to the mid-section of the fuselage just aft of the cockpit. Therefore, Ratony does not disclose the limitation of the engines being located on the forward end of the fuselage.

Due to the reasons cited above, the applicant respectfully requests that the rejection of Claim 7 under 35 USC 103(a) based upon Buchanan in view of Ratony be withdrawn.

Claims 3 and 4 are rejected under 35 USC 103(a) as being unpatentable over Buchanan in view of Wenzel (USPN 4,146,199). Claims 3 and 4 are dependent upon claim 1 and therefore

include all of the limitations of claim 1. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. MPEP § 2143.03. As previously mentioned, Buchanan does not disclose an upper wing that is properly located to meet the limitations that the upper wing is aft and above in relation to the coanda and that the lower wing is below and forward in relationship to the upper wing. Also none of the cited prior art discloses a wing configuration that includes the limitation of the coanda splitting the airflow between the upper wing and the lower wing and increasing the density and velocity of the airflow across the top surface of the lower wing.

Following a review of Wenzel, it is unclear where Wenzel discloses that the upper wings have a curved upper surface and a flat bottom surface. Figure 5 is a cross-section showing both the upper and lower wings. In Figure 5, it appears that both the upper and lower wing have a curved upper and a curved bottom surface. The Applicant was unable to find anything in the specifications that would contradict this finding.

Due to the reason cited above, the Applicant respectfully requests that the rejection of Claims 3 and 4, under 35 USC 103(a) based upon Buchanan and Wenzel, be withdrawn.

Claim 9 was rejected under 35 U.S.C. 103 as being unpatentable over Buchanan and Ratony in view of Clark, et al. (U.S.P.N. 3,651,583). Claim 9 is dependent upon Claim 7, which in turn is dependent upon Claim 1. Therefore, the limitations of Claims 1 and 7 are also included in Claim 9. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. MPEP § 2143.03. As previously mentioned, Buchanan does not disclose an upper wing that is properly located to meet the limitation that the upper wing is aft and above in relation to the coanda and that the lower wing is below and forward in relationship to the upper wing. Also none of the cited prior art discloses a wing

configuration that includes the limitation of the coanda splitting the airflow between the upper wing and the lower wing and increasing the density and velocity of the airflow across the top surface of the lower wing.

As also previously mentioned, the engines on Ratony are located on a pair of wings which are attached to the mid-section of the fuselage, just aft of the cockpit. As such, it does not disclose the limitation of "a pair of engines for generating thrust located on the forward end of the fuselage."

For the reasons cited above, the Applicant respectfully requests that the rejection of Claim 9 under 35 U.S.C. 103(a), based upon Buchanan, Ratony and Clark, be withdrawn.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan, in view of Appa (U.S.P.N. 6,190,484). Claim 10 is dependent upon claim 1. Claim 11 is dependent upon claim 10 and in turn claim 1. Therefore both claim 10 and 11 include the limitations of claim 1. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. MPEP § 2143.03.

As previously mentioned, Buchanan does not disclose an upper wing that is properly located to meet the limitations that the upper wing is aft and above in relation to the coanda, and that the lower wing is below and forward in relationship to the upper wing as found in claim 1. Also none of the cited prior art discloses a wing configuration that includes the limitation of the coanda splitting the airflow between the upper wing and the lower wing and increasing the density and velocity of the airflow across the top surface of the lower wing.

Claim 10 has been amended to include the limitation that the cells are flexible. The variable camber aero hydrodynamic surface ("VCAHS") structure of the present invention as found in claim 10 is a plurality of cells on the outer surface of an aircraft, which expand and/or

contract to change the contour of the surface. Appa teaches a composite structure of rigid cells that provide structural support for the wings of an aircraft. As such, once the wings are formed the shape of the cells (and the surface of the wing) in Appa are fixed and cannot be altered. Therefore Appa is not analogous to claim 10 and does not disclose the limitation of a flexible cell .

Claim 11 as the limitation of pressure and vacuum manifolds and lines and valves to connect them to the cells of the VCAHS. The Applicant contends that Appa teaches away from the VCAHS as claimed in 11 and it would not have been obvious to add these pressure and vacuum manifolds, lines and valves to the structure disclosed in Appa. The cells in Appa are intended to be rigid and provide the structural strength of the wings. As such applying vacuum or pressure would not alter the shape of these cells. In turn the cells in Appa are not capable of altering the contour of the surface of the wing.

For the reasons cited above, the Applicant respectfully requests that the rejection of Claims 10 and 11 under 35 U.S.C. 103(a), based upon Buchanan in view of Appa, be withdrawn.

The Applicant gratefully acknowledges the allowance of claim 13 and the objection and suggestion for claim 8. The Applicant believes that in light of the remarks and amendments herein claims 1 and 7 (the base claims for claim 8) are allowable and in turn claim 8 is allowable as originally filed. If this is not the case the Applicant reserves the option to amend claim 8 in accordance with the Examiner's suggestions.

The Applicant is further submitting a Request for Extension of Time and requesting that the fee to cover the two month extension of time be charged to Deposit Account No. 502448.

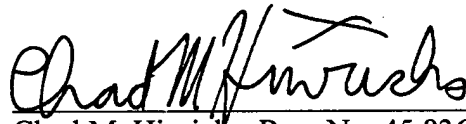
Further, Applicant is submitting a new Power of Attorney giving Chad M. Hinrichs power to prosecute the application identified above and to transact all business in the U.S. Patent and Trademark Office connected therewith.

The Commissioner is authorized to charge any additional fees or credit any overpayments associated with this application to the Deposit Account No. 502448.

It is believed that the foregoing is fully responsive to the outstanding Office Action. If any other issues remain, a teleconference with the Examiner is respectfully requested. For all of the foregoing reasons, it is believed that the application is now in condition for allowance and such action is earnestly solicited.

Respectfully submitted,

DOERNER, SAUNDERS, DANIEL & ANDERSON

A handwritten signature in black ink, appearing to read "Chad M. Hinrichs", is written over a horizontal line.

Chad M. Hinrichs, Reg. No. 45,836
320 South Boston, Suite 500
Tulsa, Oklahoma 74103
(918) 582.1211
Attorney for Applicant